

Job Title: Fuelling Engineer IO0771

Requisition ID **6582** - Posted - (France, 13067 St Paul Lez Durance Cedex) - **Engineering of Systems - New Posting**

The ITER Organization brings together people from all over the world to be part of a thrilling human adventure in southern France—building the ITER Tokamak. We require the best people in every domain.

We offer challenging full-time assignments in a wide range of areas and encourage applications from candidates with all levels of experience, from recent graduates to experienced professionals. Applications from under-represented ITER Members and from female candidates are strongly encouraged as the ITER Organization supports diversity and gender equality in the workplace.

Our working environment is truly multi-cultural, with 29 different nationalities represented among staff. The ITER Organization Code of Conduct gives guidance in matters of professional ethics to all staff and serves as a reference for the public with regards to the standards of conduct that third parties are entitled to expect when dealing with the ITER Organization.

The south of France is blessed with a very privileged living environment and a mild and sunny climate. The ITER Project is based in Saint Paul-lez-Durance, located between the southern Alps and the Mediterranean Sea—an area offering every conceivable sporting, leisure, and cultural opportunity.

To see why ITER is a great place to work, please look at this video

Application deadline: 02/10/2022

Domain: Engineering Domain

Department: Engineering Design Department

Division: Fuel Cycle Division

Section: Fuelling & Wall Conditioning Section

Group: Disruption Mitigation System

Job Family: Engineering

Job Role: Engineer – 3

Job Grade: P3

Language requirements: Fluent in English (written & spoken)

Contract duration: Up to 5 years

Purpose

As a Fuelling Engineer, you will manage the design and integration of the Disruption Mitigation System (DMS) and Fuelling Pellet Injection System (FPIS), including the development of documentation necessary for the procurement arrangements, interface management, and to supervise the system procurement.

Background

Both DMS and FPIS utilize cryogenic pellets (in the order of 10 Kelvin and less) composed of flammable (e.g. hydrogen) and non-flammable gases (e.g. neon) and mixtures, which are injected into the ITER plasma on demand. This is required to mitigate occurring plasma disruptions or to fuel the plasma during normal operation, respectively.

Fuelling and Wall Conditioning Section (FWC) is responsible of the Gas Injection System (GIS) and Glow Discharge Cleaning System (GDC) procured by Chinese Domestic Agency (DA), Pellet Injection System (PIS) procured by US DA, and Disruption Mitigation System (DMS) ITER Organization (IO) responsible procurement.

This position is assigned to the DMS Group under Fuelling Wall Conditioning Section (FWC) mainly for DMS Engineering and procurement support. This position also provide engineering support to the PIS procurement.

Key Duties, Scope, and Level of Accountability

- Ensures the design, development and scheduling of the DMS and FPIS, including controlling the functional and physical interfaces of DMS and FPIS with other systems and components;
- Supervises the DA progress in the engineering, R&D activities and procurement of the DMS and FPIS;
- Provides assistance to the DAs and ITER Groups to carry-out engineering, R&D, interface control and procurement work;
- Participates in writing and reviewing technical documentations, such as Technical Specifications (TS), System Requirement Documents (SRD), Interface Control Documents (ICD), Design Description Documents (DDD) and other documents necessary for the procurement arrangements;
- Manages the IO procurement of the DMS and supervises the US DA, which is responsible of PIS procurement;
- Implements DMS R&D Work Plan and supports International DMS Task Force.
- Manages the engineering contracts for the fundamental DMS studies and DMS support laboratory;
- Supports Machine Assembly and Commissioning teams as a technically responsible engineer, which include drafting the Assembly Plan and Commissioning Plan;
- May be requested to be part of any of the project/construction teams and to perform other duties in support of the project;
- May be required to work outside ITER Organization reference working hours, including nights, week-ends and public holidays.

Note: May be requested to work on beryllium-containing components. In this case, you will be required to follow the established ITER Beryllium Management Program for working safely with beryllium. Training and support will be provided by the ITER Organization.

Measure of Effectiveness

- Assures high quality completion of the activities of Engineering, R&D, procurement and implementation according the required time schedule and within the authorized budget;
- Ensures that procurement activities are completed in line with the defined schedule, cost and quality requirements;
- Performs work safely and securely;
- Efficiently resolves design and interfaces issues for FWC;
- Communicates and collaborates effectively and harmoniously with ITER staff, DAs and contractors;
- Produces, maintains and records up to date documentation;
- Anticipates and/or proposes practical, cost-effective, manageable and efficient solutions to solve issues.

Experience & Profile

- **Professional Experience:**
 - Minimum 8 years' experience in performing the design, construction, installation, commissioning and operation of fuelling systems in fusion devices or similar.
- **Education:**
 - Master degree or equivalent in the mechanical or electric engineering field or other relevant discipline;
 - The required education degree may be substituted by extensive professional experience involving similar work responsibilities and/or additional training certificates in relevant domains.
- **Language requirements:**
 - Fluent in English (written and spoken).
- **Technical competencies and demonstrated experience in:**
 - Tritium safety, nuclear licensing, cryogenic system, vacuum pumping system and plasma physics is advantageous;

- Interface management: Identify, resolve and maintain technical and functional interfaces
- Project Management and Procurement: Coordination of technical activities of complex systems;
- Writing and reviewing technical documents required for procurement;
- Installation and commissioning of systems for fusion or nuclear installations, including leading site acceptance tests;
- Hands-on experiences in FEM and/or CFD analysis are advantageous;
- Capability with Computer Aided Design (CAD – with special attention to AVEVA PDMS) software is highly desirable
- **Behavioral competencies:**
 - Collaborate: Ability to facilitate dialogue with a wide variety of contributors and stakeholders;
 - Communicate Effectively: Ability to adjust communication content and style to deliver messages to work effectively in a multi-cultural environment;
 - Drive results: Ability to persist in the face of challenges to meet deadlines with high standards;
 - Manage Complexity: Ability to analyze multiple and diverse sources of information to understand problems accurately before moving to proposals;
 - Instill trust: Ability to apply high standards of team mindset, trust, excellence, loyalty and integrity.

The following important information shall apply to all jobs at ITER Organization:

- Maintains a strong commitment to the implementation and perpetuation of the ITER Safety Program, ITER Values (Trust; Loyalty; Integrity; Excellence; Team mind set; Diversity and Inclusiveness) and Code of Conduct;
- ITER Core technical competencies of 1) Nuclear Safety, environment, radioprotection and pressured equipment 2) Occupational Health, safety & security 3) Quality assurance processes. Knowledge of these competencies may be acquired through on-board training at basic understanding level for all ITER staff members;
- Implements the technical control of the Protection Important Activities, as well as their propagation to the entire supply chain;
- May be requested to work on beryllium-containing components. In this case, you will be required to follow the established ITER Beryllium Management Program for working safely with beryllium. Training and support will be provided by the ITER Organization;
- May be requested to be part of any of the project/construction teams and to perform other duties in support of the project;
- Informs the IO Director-General, Domain Head, or Department/Office Head of any important and urgent issues that cannot be handled by line management and that may jeopardize the achievement of the Project's objectives.